

## CLAIMS

What is claimed is:

1. A snap-in roller assembly for patio doors, comprising:
  - an outer housing having an outer surface;
  - an inner housing;
  - at least two roller wheels affixed to the inner housing to maintain  
the wheels in a fixed position relative to each other;
  - an adjustment mechanism which adjusts the inner housing to a desired  
position within the outer housing;
  - at least one retaining member incorporated into the outer housing, the  
retaining member comprising a base portion and an end portion,  
wherein the base portion is positioned at a first height that is  
substantially flush with the outer surface of the outer housing and  
the end portion projects away from the outer surface of the outer  
housing to a second height that is greater than the first height  
relative to the outer surface; and
  - at least one mounting tab affixed to the outer housing.
2. The assembly of claim 1 wherein the inner housing is a pair of parallel plates  
each containing a slot therein that accepts a portion of the adjustment  
mechanism to limit travel of the inner housing to a substantially vertical  
path with respect to the outer housing.

3. The assembly of claim 1 wherein the outer housing is a pair of substantially parallel plates which overlie the inner housing and limits travel of the inner housing to a vertical path while substantially limiting horizontal movement.
4. The assembly of claim 3 wherein each parallel plate of the outer housing has at least one retaining member.
5. The assembly of claim 3 wherein each parallel plate has two equally spaced substantially collinear retaining members.
6. The assembly of claim 1 wherein the at least one retaining member is a flared tab-like member that projects outwardly in a linear path from the first height at the base portion to the second height at the end portion.
7. The assembly of claim 5 wherein the retaining members are flared tab-like member that project outwardly in a linear path from the first height at the base portion to the second height at the end portion.

8. A snap-in roller assembly for patio doors, comprising:
- an outer housing having an outer surface;
  - an inner housing;
  - at least two roller wheels affixed to the inner housing to maintain the wheels in a fixed position relative to each other;
  - an adjustment mechanism which adjusts the inner housing to a desired position within the outer housing;
  - at least one retaining member attached to the outer housing, the retaining member comprising a base portion and an end portion, wherein the base portion is positioned at a first height that is substantially flush with the outer surface of the outer housing and the end portion projects away from the outer surface of the outer housing to a second height that is greater than the first height relative to the outer surface; and
  - at least one mounting tab affixed to the outer housing.
9. The assembly of claim 8 wherein the inner housing is a pair of parallel plates each containing a slot therein that accepts a portion of the adjustment mechanism to limit travel of the inner housing to a substantially vertical path with respect to the outer housing.

10. The assembly of claim 8 wherein the outer housing is a pair of substantially parallel plates which overlie the inner housing and limits travel of the inner housing to a vertical path while substantially limiting horizontal movement.
11. The assembly of claim 10 wherein each parallel plate of the outer housing has at least one retaining member.
12. The assembly of claim 10 wherein each parallel plate has two equally spaced substantially collinear retaining members.
13. The assembly of claim 8 wherein the at least one retaining member is a flared tab-like member that project outwardly in a linear path from the first height at the base portion to the second height at the end portion.
14. The assembly of claim 12 wherein the retaining members are flared tab-like member that projects outwardly in a linear path from the first height at the base portion to the second height at the end portion.

15. A method of installing and retaining a roller assembly in sliding patio doors comprising the steps of:
- providing a snap-in roller assembly for patio doors, comprising
- an outer housing having an outer surface;
  - an inner housing;
  - at least two roller wheels affixed to the inner housing to maintain the wheels in a fixed position relative to each other;
  - an adjustment mechanism which adjusts the inner housing to a desired position within the outer housing;
  - at least one retaining member comprising a base portion and an end portion, wherein the base portion is positioned at a first height that is substantially flush with the outer surface of the outer housing and the end portion projects away from the outer surface of the outer housing to a second height that is greater than the first height relative to the outer surface; and
  - at least one mounting tab affixed to the outer housing;
- providing a patio door comprising a lower rail having a material wall thickness, wherein a hole is defined in the material wall thickness for receiving the roller assembly;
- inserting the roller assembly through the hole; and
- positioning the roller assembly in the hole so that the wall thickness of the

rail is captured between the at least one retaining member and the at least one mounting tab to retain the assembly in its proper location with respect to the patio door.

16. The method of claim 15 wherein the inner housing is a pair of parallel plates each containing a slot therein that accepts a portion of the adjustment mechanism to limit travel of the inner housing to a substantially vertical path with respect to the outer housing.
17. The method of claim 15 wherein the outer housing is a pair of substantially parallel plates which overlie the inner housing and limits travel of the inner housing to a vertical path while substantially limiting horizontal movement.
18. The method of claim 17 wherein each parallel plate of the outer housing has at least one retaining member.
19. The method of claim 17 wherein each parallel plate has two equally spaced substantially collinear retaining members.
20. The method of claim 15 wherein the at least one retaining member is a flared tab-like member that projects outwardly in a linear path from the first height at the base portion to the second height at the end portion.

21. The method of claim 19 wherein the retaining members are flared  
tab-like member that project outwardly in a linear path from the first height  
at the base portion to the second height at the end portion.